

The Science Trap: Confronting Skepticism without Positivism, a Proposition for the Ecological Demos¹

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Abstract

The counter-movement of environmental skepticism has worked to cast doubt about the authenticity of environmental problems. The most common response is to respond to skeptical claims in point-counterpoint discourse where both camps refer to the objectivity of their claims. This paper will argue that this is a trap inherent in Enlightenment-led science looking for separation of subject-objects terms, but which is vulnerable to the extremes of authoritarian use of knowledge for power, or the opposite—inescapable relativism. The effect of the science trap, though, is to lock the social action with paralysis because there *appears* to be a controversy in the expert community, even when there is not. One solution is to avoid the trap altogether, but in a way that does not skirt evaluation and merit in propositions. Given reasonable conditions for public discussion, we not only dig ourselves out of the hole but we in fact never step in it to begin with. Such terms of evaluation do not lead to relativism either, but a more grounded way of seeing discourse and legitimacy.

INTRODUCTION

There is currently sufficient evidence to indicate that environmental skepticism is an elite-led counter-movement organized by conservative think tanks, mostly in the United States (1-6) and is exclusively a global North position(7). Indeed, such an effort of conservative resistance was called for and is admitted by some key skeptics (8-10).

¹ Much of this work comes from or is a continuation of thinking from my forthcoming book with Ashgate, *Environmental Skepticism: Ecology, Power, and Public Life*.

Environmental skepticism offers the position that serious, usually global, environmental problems are either unreal or unimportant—i.e., inauthentic(11). Environmental skepticism is defined by its rejection of ecological science (or its consensus positions), but consequent themes in skepticism are a rejection of increased government regulation, corporate liability, or other interference in free enterprise, a sense that environmental problems are not public interests and therefore do not compare well with other priorities, and the sense that addressing such inauthentic sustainability problems are a war on Western progress(1). Indeed, the words “junk science,” according to an analysis of news media by Herrick and Jamieson(12), are almost never used in a pro-regulatory context. Further, Dixie Lee Ray, a powerful skeptic of her time, used to refer to any environmental science that demonstrated an environmental problem as “regulatory science”(13).

In addition to this framing, we see that there are several indications that the general public *and* policy *and* science elites have been successfully confused by the counter-movement on various but profound levels.

Witness the following observations. First, when it comes to climate change, over half of the American public still believes that climate scientists are sufficiently divided on the reality of climate change. In three polls between 1997–2007 most Americans believed climate change was occurring, but when asked if they thought, “most scientists agree with one another about whether or not global warming is happening,” a majority perceived “a lot of disagreement”(14). Indeed, it appears that the conservative movement has effectively made climate science a partisan issue where there now is a clear partisan cleavage between US Democratic and Republican citizens on just how compelling individuals consider climate science(15). Further witness the startling findings of Myanna Lahsen (4, at 138) when she quotes a Congressional Democratic staffer on a science committee:

Washington has had think tanks that do battle with policy issues for a long time. That is a staple of Washington life. What is different about think

tanks such as the Marshall Institute [an influential Washington D.C.–based think tank] is the veneer of scientific credibility. Congress can't tell the difference between real science and junk science; they [i.e., the purported experts] all wear white lab coats.

From these observations, it is clear that even policy makers close to the machinations of power have been ineffective in evaluating knowledge claims.

Of course, the elegance of “free speech” is free response, and we then witness the responses of mainstream scientists pointing out the substantial weaknesses in the skeptics' points. For example, at the debut of Lomborg's (16) *The Skeptical Environmentalist*, there was a frenzy of publications denouncing cherry-picked evidence, factual errors, and erroneous or misleading conclusions (17-20). Certainly, this is the duty of a scientist or other intellectual who has identified some fraud or infidelity in public knowledge claims and the performance of this duty must continue in service to the public trust of expertise. But, then skeptics respond back with counter-claims about the corruption of data, the peer review system, government grant funding, the misuse of computer models, and the generalized “litany” of “junk science.” It may be clear to the elites engaged in these debates where the weaknesses are in these lobbies, but I assume that the general public—indeed, we see above that even to policy elites—that regardless of the truth of the matter, will reasonably perceive an exchange of equal blows. This is even with the caveats about the social constraints on science noted by Jasanoff (21).

- Let me re-iterate this last point—regardless of the actuality of a controversy in mainstream science journals and conferences or the normal processes of science—outsider laypeople *and* elites will not be able to know whether or not the dispute itself is inauthentic or merely one that is manufactured to immobilize social deliberation and action.

Normal science will make this worse by responding to controversies with point-counterpoint, generating the appearance of an evenly divided debate between “dueling scientists”(2). This is the “science trap”—where point-counterpoint exchange between *apparently* equally credentialed experts immobilizes public discourse through *apparent* controversy. The public has little way to decide between the two (or more) sides and will likely figure the problem is too irresolute for social action. The status quo policy proponents-- in this case the skeptics position on avoiding climate mitigation-- wins their objective simply by continuing the controversy and challenging normal science. They never have to produce any constructive knowledge claims themselves, and they need not ever “win” the scientific point to win their goal.

If this is true, increasingly complex science-related problems, like global environmental changes, will not be solved in the polis by experts, despite the fact that we will need more expertise.

Given this problem of apparent controversy, balancing norms on climate change have been triggered in the news media, as an attempt to cover both sides without appearing to unfairly favor one voice over another, a legacy of professional reporting ethics. Boykoff and Boykoff (22) call this the “bias of balance” and is another indication that the skeptical counter-movement has been effective in obstructing productive discussions. Even professional reporters – who are presumably trained in fidelity and authenticity— have been unable to effectively penetrate the skeptical counter-movement’s machinations. However, in addition to stalling active discussions on what kind of action to take on issues like climate change mitigation, democratic expectations and conditions have been wounded through our relative inability to decide which case has more merit.

And, in such as situation, “no action” is the default position.

All of the issues above indicate that the science trap is a Hobson’s choice where we either validate one science as a hammer of authority, or abdicate all knowledge claims

in nihilism in pursuing an empty brand of fairness. This brand of fairness holds that, inasmuch as liberal states cannot favor outcomes over processes, one position cannot be marked publically as less valid without a violation of liberal principles. But, like all Hobson's choices, this is a false choice, and there are more options.

Historically, Western societies have worked each side of this dilemma. In Enlightenment science, Bruno Latour (23) instructs us that we have held science as the arbiter of enlightenment, where Science [his term for scientism] goes out into the light of truth burdened with the task of coming back to the rest of us to describe *veritas*. Thus, there is no politics under Enlightenment science's demands in the sense that Science tells us what is true, and debate is silenced or thoroughly confounded. In cases where there are policy implications for the public(24), opponents can marshal contrarian scientists who then also claim to come from outside Plato's Cave to announce the truth. In the analogy of the Cave, this leaves the rest of us staring at doppelgangers who make contrary claims—but since we remain trapped in the Cave, we cannot judge between the two informants who say they have seen the light of Truth and are here to help us.

In reaction to the yolk of modernity and its principle aim—control (see for example 25)—post modernists unleashed the power of deconstruction to expose social decisions that characterize the prospect of science, knowledge, truth and what is deemed 'natural'. Thus, under post-modernism, everything is social, and there is no claim more or less true than others that have been fabricated and presented as reality. Latour points out, however, that this is really more modernism in that it is still a dichotomous position, regardless of the post-modern rejection of just this kind of logic.

The science trap then gives us a historical, embedded, and pernicious problem that is not easily addressed, and the above should indicate that we do not often succeed in making social decisions with wisdom. Reflecting on Latour(23, 26) in particular, I propose that we never step in the science trap to begin with, avoiding it by improving skills in civic evaluation and deliberation.

FIRST CONDITIONS OF THE ECOLOGICAL DEMOS

The first condition of the ecological demos is that knowledge claims be treated as propositions, rather than discoveries or truth claims. Propositions are claims for us to consider, and are therefore injunctions to listen, but not all propositions are of equal merit. Propositions are different than discovery or truth claims which can be positioned as either true/false choices, but evaluation of propositions is not focused on the truth or untruth of the matter as much as they use civic tools to discern the nature of discourse.

The first civic and epistemic skill required in the ecological demos is to identify parochialism. Parochialism is the central anti-democratic obstacle because in parochial attitudes, we effectively narrow our vision, accepting the claims that fit that vision. Parochialism is manifest in multiple well-worn ways—ideology, political-economic interests/profitteering, aggrandizement, self-indulgence and egoism, corruption, paternalism, patronage, and other forms of *procedurally limiting what and whom is recognized*. We might look upon the crimes of history as consistently rationalizing the convenient rejections of others and other claims, where the class of Others are populated by unrecognized groups kept out by parochial politics--- racism, fascism, classism, patriarchy, and scientism.² All of these ‘isms’ are centered on parochial principles of exclusion. Dislodging parochialism, then, is a liberatory democratic project, in addition to making our knowledge about the world more robust.

Some Evaluative Measures

Rather than looking to science to provide the truth of the matter, propositions are not evaluated by how true they are—we have already demonstrated how vulnerable that project is-- but rather how compelling a knowledge claim is to our assembly of listeners. Notice that even though we instantly dispose of scientism, we do embolden the science and the prospect of science in the public. I will argue that there are several conditions

² Here I make the distinction of Others and others—the first are politically constructed instruments without agency, the second are recognized as having their own agency and deserve recognition.

that make a proposition more compelling in the polis, after discussing some rules of discourse.

Propositions are better articulated if they allow for the “power to take into account” and the “power to arrange in rank order” (23, 109). Latour believes that these criteria allow us to explore life together according to “due process.” The criteria are that:

1. We do not arbitrarily simplify the number of propositions taken into account (perplexity).
2. We do not arbitrarily mute voices making propositions (consultation).
3. We evaluate new propositions in relation to established propositions (ones that have been instituted) (hierarchization).
4. Once a proposition is instituted we must accept the legitimacy of the presence of the proposition (institutionalization) (ibid).

However, I would like to modify this list to the following requirements for taking into account propositions. First, it occurs to me that we do not really know the difference between arbitrary and authentic simplification in the universe of propositions, and should therefore be quite open and inclusive in the realm of what propositions are first allowed into the polis. That is, any exclusion is potentially an arbitrary one.

Second, evaluating propositions requires a bit more than I think Latour provides, namely emotional intelligence. We know from work in cognitive science that thought and rationality operate from an embodied, evolutionary context (27). Here, the principal cognitive tools that help us make sense of the world through deriving connections between familiar rules and knowledge and new rules and knowledge are our bodies (e.g., our brain) and the biophysical world we live in, where rationalities have evolved from interaction with the ecological world and our very flesh.

What we know and how we categorize what we know, comes largely from what we have lived, now and from millennia past. Emotional intelligence is therefore not a reactionary

hysteria, but rather a grounded and experiential intelligence learned, but which we feel even if we do not have solid grasp on its direct origin. The more we learn about cognition, reason, and behavior, the more we see them as interrelated, and the more the old hyper-exclusionary paradigm is discarded so that behavior is jointly managed by cognition and emotion (see also *28*).

Within philosophy there is a long tradition that views emotion and reason in direct opposition. Such an oppositional relation has been questioned on the basis that, under certain circumstances, emotion-related processes can advantageously bias judgment and reason (*29, at 1194*).

And, this advantage in judgment is situated biophysically and has a function in adaptation and evolution.

An ability to ascribe value to events in the world, a product of evolutionary selective processes, is evident across phylogeny. Value in this sense refers to an organism's facility to sense whether events in its environment are more or less desirable. Within this framework, emotions represent complex psychological and physiological states that, to a greater or lesser degree, index occurrences of value. It follows that the range of emotions to which an organism is susceptible will, to a high degree, reflect on the complexity of its adaptive niche. In higher order primates, in particular humans, this involves adaptive demands of physical, socio- cultural, and interpersonal contexts (*29, at 1191*).

And, finally, without key brain-related functions that help guide emotion--empathy in particular-- we lay the groundwork for sociopathic behavior. Thus, knowledge and reason are embodied and evolutionarily drawn from emotional intelligence that is critical for a functional personal life, let alone a workable life together. How we feel about something informs why we see something as a logical or rational proposition, and it always has been this way even if emotional intelligence has been marginalized as

(ir)rationality in Western modernity.

Bodies are imbued with a species-wide intelligence, and they have an evolutionary wisdom that is the bases for our everyday framing of the actors and world around us. This indicates that our cognitive domain is a product of millions of years of living on earth, and that “feeling” and “reason” cannot be disentangled. While even in our personal lives we know we can be deceived by our feelings, we cannot say that modernist rationalism and positivism provide a better map. And, to create hyperbole

THE INJUNCTION TO LISTEN

1. *All* propositions should given space for articulation in the demos (radical perplexity).
2. *All* actors are permitted to voice a proposition and make a claim (radical consultation).
3. Propositions are made in a historical context, and should be evaluated and discussed in light of fit with prior institutionalized propositions (responsibility to history).
4. Propositions only occur in communities, and therefore communities contextualize and mediate propositions and are not alienated from it (epistemic socialism).

between reason and emotion is again descending into a problematic binary opposition when it is more productive to see the co-production of the two. Thus, I offer the following reforms of Latour’s criteria taking public discourses into account:

With the above criteria, propositions are taken into account (heard) in the ecological demos. Then in hearing the claims, we can discern between the panoply of other claims by using these notions:

INJUNCTION FOR APPRAISAL

5. Propositions are more compelling if there is corroboration between multiple ontologies, perspectives, voices (concurrence).
6. Propositions are more compelling if they evoke concurrence in feeling across multiplicity (emotional concurrence).
7. Propositions are more compelling if they are transparent in terms of process, production and support, and much less compelling if such transparency is refused (disclosure).
8. Propositions are more compelling if there is fair treatment of competing propositions, and competing propositions are more compelling if they offer criteria for closure of a dispute (humility).
9. There is potential for closure of debate for social action within perplexing uncertainty, but that once a proposition is institutionalized actors must periodically reconsider its relevance according to criteria #3-#8. Institutionalization allows for temporarily closing of debate for social action (impermanent conclusion).

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impermanent conclusion differs from Latours, because it appears imprudent to “no longer question [the] legitimacy” (ibid) of a proposition once it is institutionalized. We can imagine numerous historic propositions that were institutionalized, such as eugenics, but this legitimacy deserved to be questioned. And, while it is unlikely that a racist program like eugenics could become institutionalized under the condition of

consultation, it is also likely that such criteria would operate more like heuristics. Impermanent closure allows for action but does not keep the issue from being revisited and corrected if there is a problem. Also, the record of institutions indicates that they can easily become sclerotic and this impermanence may help keep institutions dynamic.

The criterion of emotional concurrence provides the acknowledgement that we have an embodied emotional intelligence, but also that most of the time we are not making propositions as much as we are being exposed to them. Propositions are compelling, in part, given their reception, and listening with all our faculties becomes a prime civic occupation, particularly when a proposition entails social action and is controversial. These criteria for judging propositions prohibit the summary judgment of skeptical claims, and overtly include skeptical voices as part of democratic conversations. In the demos, it is wrong to mute the skeptics because they are inconvenient, but we need not move directly from allowing skeptics to make propositions to treating them as having equal merit—this quandary is exactly what lead to the “bias of balance” (22).

Specific Questions of reflexivity

If the above criteria help us parse more compelling propositions, then the following questions, which may be asked by anyone regardless of expertise might provide concrete civic solutions to the science trap. These questions are all about the preservation of fidelity—honesty about representation, and they work to dislocate epistemic parochialism as much as they attempt to institutionalize plurality. All of these questions also help to provide context to environmental skepticism. As soon as we start to ask the questions below—none of which work on the level of “But, is it true” (the title of a skeptic Aaron Wildavsky’s (30) book—but what guarantees are there against the corruption of parochialism?

The first question one might ask according to the above criteria, are “who are the good faith witnesses” of the proposition? This gets at the question of who, outside of the

proponent, can bear witness about the production of the knowledge claim? As it turns out, within academic presses and to a lesser extent popular presses, as well as newspapers, editors serve as decisive good faith witnesses. We assume that, when reading the news, that reporters had to provide and convince editors that the conditions of reporting were authentic and not misrepresented. But, we have already seen that newspapers have not always done an effective job at creating evaluative discourse, and instead have legitimated and distributed skeptical claims without providing adequate context for the production of the skeptical complaints. This seems to point to the fact that more reflexivity is needed, and that editors, in their own code of ethics and professionalism should candidly reflect on the utility of point-counterpoint presentations. Fair representation of multiple viewpoints is not dependent on this calculus. However, one thing is certain—when skeptics use ideological think tanks as the publisher of their claims, the witness (say, the think tank director or editor) and the author have the same parochial vision, and there is a lack of a “good faith” witness even if there are witnesses. Indeed, we know that in some cases, when authors violate the goals and vision of conservative think tanks, they have been sometimes fired from their jobs (see for example 31). Demands to remain faithful to ideological conformity would be the opposite of a good faith witness because its role is to discipline challenges to parochialism.

Another question is “what is the depth of multiplicity” found in corroborating the skeptical positions? This is an evaluative criteria called for by N. Katherine Hayles (32).

Hayles offers her thinking in Soule and Lease’s, *Reinventing Nature? Responses to Postmodern Deconstruction*. Importantly, this volume is meant to not rebut just postmodernism in the name of ecological study, but to rebut postmodernism’s inability to evaluate and favor one claim over another, *at the same time* the authors work to

preserve conservation biology's position as a post-normal science.³ Hayles argues against positivism and norms of objectivism, but notes we can discern better claims by those which have more corroboration over time. The depth of corroboration is stronger as people from other perspectives (ideology, material interests, etc....) come to similar conclusions. Multiplicity in corroboration is not a test of reality, but rather a test of whom else is compelled by the discussion.

Further, we may ask, what kind of scrutiny and exposure to criticism was the proposition subject to before being articulated? If it is a publication, then what kind of scrutiny and exposure to criticism did it receive prior to being published? It is on this count, that, for example, web pages would mostly fail as immediately compelling propositions. While the World Wide Web provides astounding perplexity and multiplicity, ideas are often only exposed to scrutiny once published, but this type of scrutiny can be stubbornly ignored by the proponent. This type of scrutiny is important, but not it is not as telling as scrutiny that occurs for propositions prior to formal articulation because the proponent has a responsibility to answer critics as the proposition is being formalized in discourse. The principle avenue for academics in this regard is peer review. Peer review, admittedly flawed with regular corruption, is a democratic asset because it is a process whereby knowledge claims must survive the gauntlet of challenges that come from criticism to become part of the academic canon, and even then, one singular proposition (say, one article) hardly ever establishes something as a more compelling claim until there is continued corroboration over time. However, the fact remains that peer review itself is an important institution that demands academics, including scientists, pay attention to their responsibility to history, that they have a transparent process of how knowledge claims are made, *and* these types of publications then have good faith witnesses in journal editors that bear witness to the review process itself. Skeptics and the skeptical counter-movement do not pass this test, generally speaking, and so their main outlet is through venues without exposure to criticism outside their parochial communities, and with little or no good faith witnesses. When we ask, "who

³ Otherwise there is little reason to actual pay attention to postmodernism from the perspective of normal science with high paradigmatic consensus.

is consulted” in the production of skeptical propositions, we get a parochial answer of “other skeptics”; and, when we ask, “who offers perplexity” to the skeptical claims, we get another parochial, unsatisfying answer of “other skeptics.”

It is democratically and epistemologically illegitimate to cast summary judgment on skeptics simply because they are outliers to mainstream scientific conclusions about the state of the world. But is it imprudent and unwise to treat their claims as if they, again generally speaking, endured (even remotely) the same kind of scrutiny and multiplicity as other claims. On this level, skepticism is by itself unconvincing because it is so alone and so un-chaffed by “due process.” On these grounds we can reject environmental skepticism, and we should.

CONSEQUENT CONDITIONS OF THE ECOLOGICAL DEMOS

This section will acknowledge the critical mass occurring in ecological politics demanding that we extend our democratic recognition beyond humanity and beyond the parochial bounds of modern politics; and, it will pose consequent condition for the ecological demos related to this critical mass.

If we accept the injunction to listen, the conditions of radical perplexity and consultation force us to mark out the limits of who and what received recognition. This term of “recognition” is specifically used by Iris Marion Young(33) as a feature of everyday politics of difference, where those who receive recognition from the polity are presumed to have agency and their own purpose apart from instrumental disposal by others. Both Young and later Schlosberg(34) argue that recognition is the key to participation, and if you are not recognized, there is no space afforded to you for participation—and distribution of goods and bads (risks) occur without your consultation. Thus Schlosberg notes this claim is a foundation to environmental justice, but is often overlooked when scholars simply focus on the distribution of goods and bads alone—and not how such distribution is created. Another important point here is that the institutional recognition of members of the polity itself appear to be assumed as an initial condition, but the

assignment of initial conditions appears either capricious or built on the abuse of power. Consequently, any refusal of recognition is an arbitrary exclusion so long as the initial conditions themselves for the primary group remain mystified. For example, when colonists encountered indigenous peoples and considered them Others without agency, refusing to extend recognition, the reciprocal question of why the colonists themselves are assumed to count cannot be answered without some reference to parochial bigotry (see for example 35).

If we take the injunction to listen seriously, radical consultation and perplexity force us to think about the conditions of non-human propositions. And, while I do not think it is necessarily the case that affixing of a voice or proposition to non-humans would really be a social construction of our own imposing voice, we are forced to further assume that to annihilate an agent is the most forceful arbitrary violence. At a minimum, we must assume that others in the world wish and propose to exist and such a proposition does not end at *homo sapiens sapiens* (see 36).

The ecological demos then looks to the notions of the ecological self, proposed by Val Plumwood with related concerns issued by Winona Laduke and again Bruno Latour as a way to begin thinking about what limits we are obligated to observe for justice and for a more sustainable world political economy. Plumwood argues that the ecological self refuses radical exclusions and the disposal of Others, as well as the prospect of some “empire of the self” where we are all “one.” These two points are important because some cosmopolitans might have us think of ourselves as an uninterrupted singularity, but this is the other side of the same coin of disposal, because within the one, the agency of others is still subsumed into the desires of another.

In both cases, some of the most pernicious democratic and ethical problems we face occur in either exclusion of others and the refusal for recognition or in the subsuming other’s will into our own. Plumwood describes one ethical solution to these problems as the ecological self.

The truly social self is the mutual self; the social self salutes the social other as another *self*, a centre of subjectivity like mine but a different one, one which imposes limits on mine, and incorporates this salutation into the concept of 'I'...Similarly the ecological self recognizes the earth other as a centre of agency or intentionality having its origin and place like mine in the community of the earth, but as a different centre of agency, which limits mine (*37 at 159, emphasis added*).⁴

The ecological self, therefore is also a solution to political programs enforcing parochialism and the advancing global ecological crises. The ecological self is one that understands that there are other selves in the world, all of which are situated in ecology, which have their own importance, difference, interests and identity that are not instrumental to our own parochial ones, but assuming this requires an extension of the same considerations we wish for ourselves, and at a minimum the right or imposition to exist. This is different from deep ecology however, because there are no assumptions that when making a choice to utilize others (which we are forced to do), that we have no right to do so. The food chain is one part of this exploitation, and in order for the world of life to exist, it preys on itself. But, this is also different from any of the anthropocentrisms also, because in assuming that there are other selves (including non-humans), humans or individual humans cannot *wantonly* exploit others. These are the limits that other selves impose on us—we expect to be able to impose ourselves into the world, demanding to exist, but also we understand that that is the limit of our legitimate taking of others. There is legitimacy in hunting, fishing and using what societies need to live within ecology and the web of life itself, but there is no right to unhinge this web—quite the contrary, there is an obligation to recognize others that make up this web as limits to our desires.

⁴ Note that deep ecologists have a notion they also call the ecological self, but which is positioned differently from Plumwood's conception. The deep ecology version is criticized by Plumwood as going too far and incorporating everything into the self without acknowledging difference.

LaDuke(38) writes that indigenous peoples consider this the injunction from “all our relations.” This thinking helps non-Indigenous people to understand, for example, Native hunting. Native peoples often have traditional hunting grounds and practices, but some environmentalists (e.g., People for the Ethical Treatment of Animals) have often thought any hunting a contradiction of terms in feeling obligations to animals. However, this is not the case for many indigenous cultural institutions. Hunting is the subsistence need; what *is* unlawful in most native communities is hunting *too much*. In other words, in seeing the world full of selves, we are forced to limit over-consumption of ecology and life, even as we need to consume life to live. The ecological self recognizes that other selves impose the law of “enoughness”(see for example 39) counter-posed to accumulation--thus, the ecological demos is not and cannot be capitalist which requires accumulation. Another key indigenous thinker, George Tinker writes:

Each nation has some understanding that it was placed into a relationship with a particular territory by spiritual forces outside of itself and thus has an enduring responsibility for that territory, just as the earth, especially the earth in that particular place, has a filial responsibility toward the people who live there. Likewise, the two-leggeds in that place also have a spatially related responsibility toward all others who share that place with them, including animals, birds, plants, rocks, rivers, mountains, and the like(40at 163).

Tinker identifies this as part of a universal religious ethic common to indigenous peoples—that of an ecologically grounded (in specific space) reciprocity. Within reciprocity and an obligation to limit oneself and the consumption of others, there is no legitimate wanton disposal, *because* there are no Others—all of existence has agency and receives recognition. Reciprocity is the idea that humans are part of a cosmic whole within existence, where we are neither separate nor above the rest of existence; and, that each human action has an impact in this existence even if we do not understand it. “Knowing that every action has its unique effect has always meant that there had to be some sort of built-in compensation for human actions, some reciprocity”

(ibid40). Thus, because existence is full with other selves – we must respect other agents and nations, and any effect on this world must be balanced by human compensation.

LaTour, argues something a little different but with similar effect. He first posits that the idea of “nature” has *only* been a notion of exclusion, where it has only referred to that different part of the world that Western minds have thought they were separate from. Thus, he proposes that we “let nature go” instead thinking of the world full of human and non-human agents, where any number of associations between them can fill our lives. Inasmuch as there can be an infinite number of agents and associations, our universe and lives are full. Inasmuch as we arbitrarily limit what associations we can hold—say against rocks or llamas, we limit and impoverish our universe and lives. The ecological demos idea assumes that a more full universe is a more democratic and just universe.

Consider also the work of Robyn Eckersley. In her book on *The Green State*, Eckersley expresses a similar position where domination is resisted by critical political ecology, or a political ecology that does not take for granted what is deemed common sense or is unreflexive, and which extends recognition to those most impacted by environmental projects:

A central insight of ecofeminism and the environmental justice movement is that the domination of nature is a complex phenomenon that has been managed and mediated by privileged social classes and impersonal social and economic systems that have systematically brought benefits to some humans at the expense of others. The result is that certain privileged social classes, social groups, and nations have achieved what Mary Mellor, building on the work of Martin O'Connor, has called a 'parasitical transcendence' from human and nonhuman communities. In effect a minority of the human race has been able to deny ecological and social responsibility and transcend biological embodiment and ecological limits (i.e., achieve greater physical resources, more time, and more space) *at*

the expense of others, that is, by exploiting, excluding, marginalizing, and depriving human *and* nonhuman others (41, at 10).

By resisting wanton exploitation, the cultural system that empowers the material systems of a global capitalist system and modernism are unable to operate—but this a political battle that cannot rest on individual virtue. Rather it rests in the “deepening of democratic accountability” for the “relevant community” (41 see pp 14 and 113).

Eckersley proposes the following proposition to reconfigure how communities engage members and others:

Let us begin with a very simple, but ultimately politically challenging, ambit claim for ecological democracy based on a familiar principle: all those potentially affected by a risk should have some meaningful opportunity to participate or otherwise be represented in the making of the policies or decisions that generate the risk (41 111).

The phrase “otherwise be represented” is critical because some communities cannot participate directly in present day human conversations, such as animals and future generations. Thus, recognition to the other is granted by moving decisions “as if all those affected were present, well informed, and capable of raising objections” (41 *ibid*).

Further,

This reconceptualization of the demos as no longer fixed in terms of people and territory provides a challenge to traditional conceptions of democracy that have presupposed some form of fixed enclosure, in terms of territory and/or people. The ambit claim argues that in relation to the making of any decision entailing potential risk, the relevant community at risk, tied together not by common passports, nationality, blood line, ethnicity, or religion but by the potential to be harmed by the particular proposal and not necessarily all in the same way or to the same degree (41 113).

Here we are witnessing a concurrence of thought between Eckersely, Dobson(42) and others who believe that the relevant ecological democratic space is transnational and connects communities through ecological impacts, not borders.

CONCLUSION

This paper has posed the problem that as modernity—itsself a project of control and rationality—results in Beck's(43) well known cases of irrationality and crises (by definition a moment of catastrophic absence of control) and we hurtle toward increasing ecological imbroglios of complex proportion. This indicates an increasing need for expertise, but expertise will not solve these problems, because democratic deliberation – at either the populist or elite levels---cannot effectively discern between the appearance of conflicts between experts and the manufacture of such conflict. This is important because such conflict surrounds knowledge claims about the problems we face as political communities, and the appearance of conflict among these knowledge claims arrests social action with indecision, highlighted by the case of environmental skepticism in the United States. Civic evaluation then is required outside of expert judgment in order to get to social action.

In order to work on this problem of epistemology, civic deliberation, and ethics, the paper argues that regardless of the certainty in a knowledge claim, all knowledge claims should be seen as propositions—injunctions to listen. There should be no limit on who makes propositions or what the propositions propose, but we have no good reason to think that all propositions are of equal merit. To judge merit outside of expertise we are bound to rely on the corroboration that comes from multiple perspectives, as one standard among others proposed here.

Further, in that we allow for radical perplexity and consultation, we cannot justly mute or annihilate non-human voices without parochialism—the principle democratic obstacle

that guides social action with arbitrary capriciousness. From this point the paper argues for conditions of recognition using Plumwood's ecological self that sees the world filled with other selves, but no Others (those constructed as having no agency, which receive no recognition, and are therefore wantonly disposed of). The ecological self, however, also rejects the radical cosmopolitan premise that we are all "one" as another way to dispose of difference and agency. Instead, the ecological demos exists in a planetary whole, but works through the discussion of propositions that are made without arbitrary limits, evaluation is made fairly but judiciously of these claims, and the community of existence is extended the right to continue without wanton disposal through accumulation and instrumental exploitation that emanates from radical exclusionary parochialism.

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